

SOME CONSIDERATIONS FOR FUTURE RAPTOR REHABILITATION

by

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Abstract

A female Wedge-tailed Eagle (*Aquila audax*) was released in a national park where myxomatosis had been introduced into the rabbit population. The release eventually failed because of the eagle's aggressiveness towards humans. The use of national parks and the need for conditioning rehabilitated raptors to fear humans are discussed.

Introduction

Techniques for rehabilitating raptors have been well documented; however, we know of no failures that have been discussed even though considerable information can be gained from their analysis. Many sources (e.g., Hamerstrom 1970) discuss release procedures, but, because the outcome of these releases are unknown, the methods used cannot be accurately assessed.

Discussed below are procedures used on a female Wedge-tailed Eagle (*Aquila audax*). Though they were not completely successful, they do suggest a number of considerations for future rehabilitation work.

Release Procedure

The eagle came from Melbourne Zoo; nothing was known about her previous history. In planning her release we decided to avoid any techniques related to falconry, if possible, because of their obvious drawbacks (tameness, aggression, dependence on man, expensiveness in terms of time and labour, etc.). A 5,500-hectare nature reserve near Canberra was chosen because previous experience with a number of species, including Wedge-tailed Eagles, had shown that releases in national parks and reserves, where progress could be monitored by park personnel, provided valuable data on the effectiveness of release procedures. After conferring with authorities we decided to release her immediately after myxomatosis was introduced into the park's plentiful rabbit population. This disease is harmless to eagles (Bull and Dickinson 1937), and we hoped that she would learn to hunt the many sick rabbits and gradually improve her skills as the population was reduced. It was fairly certain that adequate numbers of rabbits would remain even after the myxomatosis had run its course (e.g., Fullagar 1977). A resident ranger left her dead laboratory rats, to which she was accustomed, every second day.

Results

Two weeks after her release she was hunting rabbits, ignored all food put out for her, and appeared to be totally independent. Curiously, she settled within a large (4-ha) waterfowl enclosure surrounded by a 3-m-high fence.

Before her release this eagle was fearful of any approaches by man, especially strangers, and she would never eat in our presence. However, two months after her release she began to harry rangers who ventured into her hunting area. These attacks were low-

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angled swoops made at high speed with opened feet. Most people were able to drop to the ground quickly enough to avoid being struck, but one ranger was cut on the arm. As she would not come to food, she was trapped with the use of a noose carpet tied to a limb used as a perch. When returned to her pen, she again became fearful of humans.

Discussion

Use of National Parks. The release of the eagle where myxomatosis had been introduced was effective. From the aspect of an eagle's welfare, large national parks have several advantages over release sites in more remote areas. The bird's progress can be monitored by park personnel, and if something does go wrong, the no-shooting laws and sympathetic personnel in these parks give some guarantee that no harm will come to a released raptor. There are often large food supplies in these parks which can keep a released raptor resident. The disadvantages of some remote areas are that more persecution (e.g., shooting or poisoning) of raptors often takes place, and, if a bird does not fear humans, it may drift away from a remote area toward settlement particularly if food supplies are inadequate. This eagle chose a fenced compound to settle in. We have had a number of rehabilitated raptors, apparently accustomed to man-made structures, travel distances up to 800 km from their release points to built-up areas.

Loss of fear of humans. The degree of fear of humans in captivity is often an irrelevant and totally inadequate criterion for predicting how fearful of humans a raptor will be after release. Restraining a raptor can compound or amplify a fearful or stressful situation (McElroy 1972, Stevens n.d.) and semi-wild raptors being tame hacked can very abruptly lose their fear of man after they are first flown free. This eagle's aggressive behavior superficially resembled that of an "imprinted" raptor (e.g., McElroy 1972); however, some wild-caught raptors that have been trained for falconry or kept in zoos for long periods before their release exhibit similar behavior (pers. obs.).

There are probably a number of released raptors that die each year because they have lost their fear of man. A Whistling Kite (*Haliastur sphenurus*) was shot in Melbourne by wildlife authorities because it had attacked a number of people, injuring one. A number of raptors, apparently escaped captives, have been sent to us after being secured while diving at people or after landing on urban roofs.

Instilling a Fear of Man. Raptor ethologists, rehabilitators, and falconers could explore behavioral mechanisms, in particular those involved in imprinting, adult-fledgling relationships, "play," territoriality, social interactions, and learning, which may reveal methods of eliminating aggression toward humans in raptors before their release. A more fruitful approach might involve the exploration of methods to systematically teach tame or hand-raised raptors to fear humans, on the assumption that aggressive behaviors will disappear as a result. This could also help overcome the main drawback that results from all tame hack methods—the tameness of the raptor.

Much has been written in falconry works about methods of systematically eliminating innate fear in raptors, but very little has been written on how to instill fear. Most raptors probably have a basic innate fear of humans (Brown 1955), which is amplified by the birds' learning and experience. Methods of taming or "manning" (Stevens n.d.) involve learning not to fear man, and these methods (perhaps coincidentally) very closely resemble some of the techniques that behavior therapists use to cure phobias in humans, e.g., flooding and systematic desensitization (Eysenk 1977). The use of similar forms of operant or classical conditioning, as outlined by Ferster et al. (1975), should provide

means to systematically teach raptors to fear people. When we were trying to trap the female eagle, she ceased launching attacks at us. Consequently, we began walking toward her to flush her to the tree containing the noose carpet. This offensive behavior on our part, contrasted with the defensive or fleeing behavior she elicited from most humans she attacked, appeared to make her fearful of us, and by the second day she would fly if we approached any closer than 150 m. However, these fears did not generalize, and she continued her attacks on other park personnel who ventured into her territory during the two days we were trying to trap her. Perhaps a variety of individuals chasing her and a consistent, offensive response from all humans would have produced more generalization and reinforcement of any fear of humans. The systematic use of pyrotechnics, air rifles, or firearms could aid in this type of conditioning if used after the bird has settled into an area as this eagle had.

Summary

Careful consideration is necessary before any raptors are released, particularly if they have been hand raised or are of unknown origin. "Ability to hunt" should not be the sole criterion for release. There may be a risk to humans and, even if the release site is remote, to the birds themselves as well as potential repercussions for future rehabilitation work.

Though it is preferable to prevent imprinting, rehabilitators often receive imprinted raptors. We release no eagles known to be imprinted, even into remote areas.

The teaching of raptors, and some other animals, to fear man would seem to be an important area of research that could also be applied to wild endangered raptors at risk from persecution. It is desirable for a raptor to fly when humans approach to within shooting range; very few rehabilitated, hand-raised raptors are fearful enough to do so.

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